

Response to Office Action Dated 12/31/09

S/N: 10/626,496

REMARKS

Reconsideration of the present application is respectfully requested in view of the following remarks. Claim 1 is currently amended and claim 7 was previously cancel. Claims 1-6 are currently pending.

A. Amendment

Claim 1 was amended to clarify a typographical error and change the term "control the endpoint to transmit a find endpoint data packet" to read "control the substation receiver to transmit a find endpoint data packet." The corrected language is consistent with the specification, page 43:15-16, and the other pending claims.

B. Reply to Office Action's Response to Arguments

Claims 1-6 stand rejected over various combinations of Ouellette, Grindahl, Ardalan, Fischer, and Sipola. The applicants respectfully traverse these rejections and do not concede any characterizations of the cited references or pending application set forth in the Office Action.

The current Office Action does not contain any new rejections and resubmits the same rejections as found in the previous Office Action, which was mailed on April 16, 2008. The applicants respectfully renew their arguments submitted on October 16, 2008 in response to the previous Office Action.

Additionally, pages 2-3 of the current Office Action contain a Response to Arguments. The applicants provide the following remarks in reply to the Office Action's Response to Arguments.

i. Ouellette teaches "transmitting a find endpoint data packet onto the power distribution network."

The Office Action states, "Ouellette teaches 'transmitting a find endpoint data packet onto the power distribution network' by pointing out metering devices to track source and

Response to Office Action Dated 12/31/09

S/N: 10/626,496

destination addresses/I.Ds in a 'find endpoint' packet shown in figure 5 items 30a/b . . . since the source and destination addresses are known."

However, as illustrated in Figure 5, the only fields disclosed in the communication protocol are PREAMBLE, CONTROL, DESTINATION ADDRESS, DESTINATION HOUSE CODE, SOURCE ADDRESS, SOURCE HOUSE CODE, INFORMATION, and FRAME CHECK SEQUENCE. See, also, cols. 8:55-9:11. There is no disclosure or suggestion in either Figure 5 or its related disclosure in the specification that the protocol in Ouellette includes any information regarding a frequency, much less a base frequency. Additionally, the office action fails to point out where Ouellette discloses a find endpoint data packet that includes a base frequency or even how a frequency is assigned to the electrical metering devices 16.

Indeed, the only disclosure in Ouellette regarding frequencies is that the nodes 21 and 22 communicate with electrical metering devices 16 via radio frequency signals. There is no disclosure that the communication protocol includes information about a base frequency or that information about a base frequency is transmitted to the electrical metering devices 16.

In sharp contrast, the pending claims explicitly define a "find endpoint data packet" as including a base frequency. Claim 1 recites, "the find endpoint data packet including the unique I.D. and the base frequency." Claim 6 similarly recites, "to transmit a find endpoint data packet over the power distribution system, the data packet including the unique I.D. for the endpoint and the base frequency." The claimed structure enables remotely programming an endpoint with a base frequency for data communication. See, e.g., page 43:5-23.

Therefore, Ouellette fails to teach or suggest a find endpoint data packet as recited in the pending claims. No combination of the cited references can result in the claimed invention and the applicants respectfully request withdrawal of the pending rejections.

Response to Office Action Dated 12/31/09

S/N: 10/626,496

ii. Ouellette teaches “a substation circuit [coupled to a power distribution line] . . . to transmit a find endpoint data packet onto the power distribution network.”

The Office Action states, “Ouellette teaches ‘a substation circuit [coupled to a power distribution line] . . . to transmit a find endpoint data packet onto the power distribution network’ by pointing out the *concept* of mobile nodes 12 & 22 (as substations) coupled to power lines in the system” The office cites col. 4: 32-37 to support its conclusion that Ouellette points out the concept that the mobile nodes are substation.

However, the cited passage makes no disclosure regarding substations. It actually states, “The communicating means preferably includes means for prompting each electrical metering device near the mobile node which is coupled via the power lines to a respective one of the plurality of distribution transformers to transmit a responsive signal. In one embodiment, the communicating means includes a transmitter and a receiver.” Within this cited passage from Ouellette, the clause “which is coupled via the power lines” modifies the term “electrical metering device.” Thus, this cited passage actually teaches that communicating means (i.e., nodes 12, 21, 22) have a transmitter and receiver to communicate a responsive signal with the electrical metering devices 16. In turn, the electrical metering devices 16 are coupled to a distribution transformer via the power lines. The nodes 12, 22 communicate directly with the metering device and are not associated with the power lines, transformers, or substation.

This interpretation of the disclosure in Ouellette is consistent with the definition of substation, which is “[a]n assemblage of equipment for purposes other than generation or utilization, through which electric energy in bulk is passed for the purpose of switching or modifying is characteristics.” IEEE Standard Dictionary of Electrical and Electronics Terms 963 (1992). Electrical energy does not pass through the nodes 12, 22 in bulk. Nor do the nodes 12, 22 switch or modify the characteristics of the electrical energy. Therefore, Ouellette does not

Response to Office Action Dated 12/31/09

S/N: 10/626,496

teach or suggest a node 12, 22 is a substation or the concept that a node 12, 22 is coupled to power lines as a substation.

In sharp contrast to Ouellette, claim 1 recites, "a substation circuit programmed to . . . control the substation receiver to transmit a find endpoint data packet onto the power distribution network." Claim 6 similarly recites, "the control server instructs the substation circuit at the second substation . . . to control the substation transceiver at the second power distribution substation to transmit a find endpoint data packet over the power distribution system."

Therefore, Ouellette fails to teach or suggest a substation circuit that controls a substation transceiver to transmit a find endpoint data packet onto or over the power distribution lines as recited in the pending claims. No combination of the cited references can result in the claimed invention and the applicants respectfully request withdrawal of the pending rejections.

iii. Grindahl teaches "mapping a unique ID for an endpoint to a base frequency and transmitting the find endpoint data packet onto the power line, the find endpoint packet including the unique ID and the base frequency."

The office action states, "Grindahl teaches 'mapping a unique ID for an endpoint to a base frequency and transmitting the find endpoint data packet onto the power line, the find endpoint packet including the unique ID and the base frequency' by pointing out a transponder that transmits RF activation signals in the form of a tone modulated onto a carrier (wave) . . . ; information packet signals are transmitted at pseudorandom frequency bandwidth (base freq.) as a Manchester encoded (string unique for each meter) bit stream . . . including an instrument identification field corresponding to each meter"

However, the disclosure in Grindahl is similar to Ouellette in that it teaches an interrogate/receiver 18 is either mobile in a van or stationary and communicates via RF signals with meters 12 through transponders 14. The communication is not over power lines and does not involve a substation. See, e.g., col. 5:3-18; figs. 1 and 2. The only data packet Grindahl

JUN 30 2009

Response to Office Action Dated 12/31/09

S/N: 10/626,496

discloses is transponder information packet 42, which does not include any information about a base frequency.

Although Grindahl teaches a pseudorandom frequency, it is actually the transponder 14 located at the meter 12, not at a substation, that transmits at a pseudorandom frequency. Additionally, the frequency is generated by a pseudorandom number generator within the transponder. The pseudorandom frequency is not a base frequency received from a substation in an endpoint data packet.

Therefore, Grindahl fails to teach or suggest a find endpoint data packet or a substation circuit that controls a substation transceiver to transmit a find endpoint data packet onto or over the power distribution lines as recited in the pending claims. No combination of the cited references can result in the claimed invention and the applicants respectfully request withdrawal of the pending rejections.

CONCLUSION

In view of the foregoing remarks, Applicants respectfully request withdrawal of all the pending rejections and allowance of the pending claims. Applicants note that there may be other reasons that the pending claims are patentably distinct and reserve the right to raise any such reasons in the future. Please contact the undersigned attorney if there are any questions or if a telephone interview can otherwise advance prosecution of this application.

Response to Office Action Dated 12/31/09

S/N: 10/626,496

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 13-2725.

Respectfully submitted,

MERCHANT & GOULD P.C.

P.O. Box 2903

Minneapolis, MN 55402-0903

612-332-3300

Date: June 30, 2009


John C. Reich

Reg. No. 37,703

JCReich/jle